

THE OLD COLONY BEACH CLUB ASSOCIATION

Wastewater Management Plan

PROPOSED SCOPE OF SERVICES

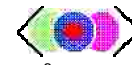
December 10, 2010

I. REVIEW EXISTING INFORMATION

- A. Natural Resources
 - 1. Topographic mapping
 - 2. Soil mapping
 - 3. Surficial geology mapping
 - 4. Depth to bedrock mapping
 - 5. Tidal wetlands
 - 6. Inland wetlands
 - 7. Water quality classification mapping
 - 8. Aquifer zones
 - 9. Coastal resources
- B. Existing Zoning and/or Land Use Ordinances
- C. Previous Planning and/or Evaluation Studies
- D. Regulatory Agencies Records
 - 1. Health Department
 - 2. Sanitary surveys
 - 3. Septic system repairs
 - 4. Surface water quality sampling (fresh and salt waters)
 - 5. Potable water supply quality sampling
 - 6. Groundwater monitoring well sampling
- E. Department of Environmental Protection
 - 1. Watershed water quality sampling data
 - 2. Long Island Sound Program water quality data

II. PREPARE BASE MAP OF BEACH ASSOCIATION

- A. Map Existing Features
 - 1. Lots/streets/rights-of-way (Assessor's mapping information)
 - 2. Topography (10' contour interval)
 - 3. Subsurface utilities (approximate locations)
 - 4. Private water supply wells (where known)



III. CONDUCT WORKSHOP I

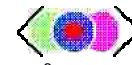
- A. Provide Overview of Study Objectives
- B. Review Schedule of Key Project Tasks
- C. Answer questions/solicit input from property owners

IV. EVALUATE EXISTING CONDITIONS

- A. Catalogue Existing Conditions
 - 1. Number of properties
 - 2. Determine average lot sizes
 - 3. Identify vacant parcels
 - 4. Existing utilities
 - 5. Number of public water supply customers
- B. Perform sanitary surveys of OCBCA properties
 - 1. Inspect septic systems throughout neighborhood during peak season to determine ability of existing systems to function under prevailing conditions
 - 2. Perform statistical analysis of data to evaluate conditions area-wide
- C. Excavate Test Pits Within OCBCA to Determine Subsurface Conditions
 - 1. Excavate up to 5 test pits throughout OCBCA
 - 2. Catalogue soil types
 - 3. Determine seasonal groundwater elevations
 - 4. Determine depth to bedrock
- D. Evaluate Water Quality
 - 1. Sample individual shallow water supply wells
 - 2. Sample storm drains
 - 3. Sample surface waters within Association boundaries
- E. Perform Septic System Effluent Transport and Treatment Analysis
- F. Perform Nitrogen Attenuation Analysis
 - 1. Evaluate “typical” lot for impacts of nitrogen on local groundwater
 - 2. Evaluate neighborhood for impacts of nitrogen on groundwater and surface waters
- G. Identify “Problem Areas”

V. CONDUCT WORKSHOP II

- A. Review Background Information
- B. Review Results of Sanitary Surveys
- C. Solicit Comments and Input from Association Members

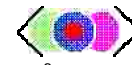


VI. EVALUATE POTENTIALLY FEASIBLE ALTERNATIVES

- A. Identify Alternatives
 - 1. Conventional, individual on-site systems
 - 2. Individual, innovative or alternative sub-surface systems
 - 3. Localized community sub-surface systems within OCBCA
 - 4. Off-site community subsurface systems
 - 5. Community treatment plant with surface or subsurface discharge
 - 6. Conventional sanitary sewers discharging to Point O' Woods or East Lyme
- B. Investigate up to 2 Remote Sites for Potential Viability as Community Treatment Sites
 - 1. Screen sites for requisite size and subsurface characteristics using published information and aerial photography
 - 2. Develop preliminary size of subsurface facilities using project wastewater flows
 - 3. Determine required facilities to convey wastewater to remote sites
- C. Screen Alternatives
 - 1. for Technical Feasibility
 - 2. for Regulatory Acceptance and Compliance
 - 3. for Public Acceptance
- D. Perform Cost-Effective Analysis of Feasible Alternatives
- E. Select Recommended Plan
- F. Identify Permitting Requirements Associated with Recommended Plan
 - 1. Federal
 - 2. State
 - 3. Local
 - 4. Amtrak

VII. DETERMINE FINANCIAL REQUIREMENTS FOR IMPLEMENTATION OF RECOMMENDED PLAN

- A. Estimate Financing Requirements and Alternatives
 - 1. Short-term borrowing
 - 2. Permanent financing
- B. Estimate Cost Allocations
 - 1. Individual residences
 - 2. Association facilities
- C. Estimate Costs to Users
 - 1. Average, annual, individual cost to amortize long-term financing
 - 2. Average, annual, operating and maintenance costs



VIII. CONDUCT WORKSHOP III

- A. Review Evaluation and Screening of Alternatives
- B. Review Comparative Cost Estimates
- C. Discuss Recommended Plan
- D. Present Funding Sources
- E. Review Financing Needs and Alternatives
- F. Review Traditional Cost Allocation Methods
- G. Present Typical Annual Costs
- H. Solicit Comments and Input from Association Members

IX. PREPARE ENVIRONMENTAL ASSESSMENT

- A. Identify and Evaluate Potential Short- and Long-Term Adverse Environmental Impacts
- B. Identify Measures to Mitigate Potential Impacts

X. PREPARE FINAL REPORT

- A. Prepare DRAFT Wastewater Management Plan
- B. Review by Association

XI. PUBLIC HEARING

- A. Publish Legal Notice in Regional Newspaper
- B. Make Presentation at Public Hearing
- C. Make Final Revisions to Plan Based Upon Comments Received at Public Hearing and Publish FINAL Report

XII. PROJECT MANAGEMENT

- A. Attend Periodic Meetings with the OCBCA Wastewater Management Committee
- B. Provide assistance with Clean Water Funds reimbursement requests